



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,107	08/06/2003	Glen Gutgold	18033 (AT 20958-2109)	6970

7590 05/04/2005
Robert Kapalka
Tyco Electronics Corporation
Suite 140
4550 New Linden Hill Road
Wilmington, DE 19808

EXAMINER

FIGUEROA, FELIX O

ART UNIT	PAPER NUMBER
----------	--------------

2833

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/635,107	Applicant(s) GUTGOLD ET AL.	
	Examiner Felix O. Figueroa	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parent (US 6,217,360) in view of Ohtsuki et al. (US 4,671,594).

Parent discloses a low profile cable connector assembly comprising: a first connector (12) comprising a base (38) and latch (40); and a cable connector (10) comprising a mating connector face (at 18), and first and second lateral sides (22,24) extending from the mating connector face; wherein one of the first and second sides of the cable connector comprises latch retainer (68) thereon, the latch retainer configured to receive the latch; and jack screw latch (26) located adjacent the other (22) of the first and second sides of the cable connector. Parent also discloses the jackscrew latch opposing the latch retainer, wherein the latch retainer and the jackscrew latch securely connect the mating connector face to the base.

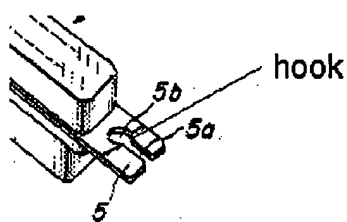
Parent discloses substantially the claimed invention except for the latch and the latch retainer being a bail latch and a bail latch retainer. Ohtsuki teaches an assembly (Figs. 1a and 1b) comprising a first connector (2) with a base (3) and a pivotally mounted bail latch (1), the bail latch being movable relative to the base between a latched and an unlatched positions; and second connector with a mating face (not

labeled) and a bail latch retainer (5) on one side, the bail latch retainer configure to receive the pivotally mounted bail latch when the bail latch is moved relative to the mating connector face to the latched position. This structure allows mating of the connectors along a straight line thus minimizing wear and tear and/or overstress of the terminals of the connectors. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the latch and latch retainer of parent as a pivotally bail latch and a latch retainer, as taught by Ohtsuki, to minimizing wear and tear and/or overstress of the terminals of the connectors.

Regarding claim 2, Parent, as modified, discloses a cable exit extending from one of the first and second sides (24) and overhanging the latch retainer.

Regarding claim 4, Ohtsuki discloses the bail latch retainer comprising a bail latch slot (5a,5b) having inward facing barbs (around 5a) defining a slot there-between.

Regarding claim 5, Parent, as modified by Ohtsuki, discloses a cable exit extending from the first side (24), and the bail latch retainer comprising a hook (following figure) located on the first side.



Regarding claim 8, Parent discloses a low profile cable connector assembly comprising: a mating connector (12) comprising a base (38) and a latch (68); and a cable connector (10) comprising a mating connector face, first and second lateral sides (22,24) extending from the mating connector face, and a cable exit (at 14) extending

from one (24) of the first and second sides; wherein the first side (24) of the cable connector comprises a latch retainer (40) thereon, the latch retainer extending substantially perpendicular to the first side; and a jack screw latch (26) located adjacent the second side of the cable connector. Parent also discloses the jackscrew latch opposing the latch retainer, wherein the latch retainer and the jackscrew latch securely connect the mating connector face to the base.

Parent discloses substantially the claimed invention except for the latch and the latch retainer being a bail latch and a bail latch retainer. Ohtsuki teaches an assembly (Figs. 1a and 1b) comprising a first connector (2) with a base (3) and a pivotally mounted bail latch (1); and second connector with a mating face (not labeled) and a bail latch retainer (5) on one side, the bail latch retainer extending substantially perpendicular to the first side and defining a slot (5a,5b) extending substantially parallel to the mating connector face, the slot configured to receive the bail latch when the cable connector is mated to the mating connector and when the bail latch is pivoted about the base to a latched position. This structure allows mating of the connectors along a straight line thus minimizing wear and tear and/or overstress of the terminals of the connectors. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the latch and latch retainer of parent as a pivotally bail latch and a latch retainer, as taught by Ohtsuki, to minimizing wear and tear and/or overstress of the terminals of the connectors.

Regarding claim 11, Ohtsuki discloses the retainer comprising a slot having a neck portion (at 5a) and a head portion (at 5b).

Claims 3, 6, 7, 9, 10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parent and Ohtsuki, and further in view of Defibaugh et al. (US 4,842,547).

Regarding claim 3, Parent, as modified, discloses substantially the claimed invention except for the oblique angle between the mating face and the cable exit. Defibaugh teaches a cable connector having a cable exit and a top surface extending at an oblique angle to the mating connector face (see Fig.1), thus providing an ergonomic shape and minimize the space use by the connector. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Parent having the cable exit and the top surface extending at an oblique angle to the mating connector face, as taught by Defibaugh, to provide an ergonomic connector and minimize the space used by the connector.

Particularly on claim 6, Parent, as modified, discloses substantially the claimed invention except for the jackscrew extending through the sloped top surface. However, it would have been an obvious matter of design preference to form the jack screw extending through the sloped top surface, since applicant has not disclosed that arrangement solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the jack screw arrangement of Parent. Absent any convincing showing of the criticality of the design, this particular design is nothing more than the inventor's choice without thereby departing from the scope of the invention. *In re Dailey*, 149 USPQ 47 (CCPA 1976).

Regarding claim 7, Parent, as modified, discloses substantially the claimed invention except for the first and second back shells (12,14). Defibaugh teaches a connector defined by first and second back-shells (12,14) joined to one another, and one of the back-shells (12) including the retainer structure, thus reducing the manufacturing cost and simplify the production of the connector. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Parent defined by two back-shells joined to one another, as taught by Defibaugh, to reduce the manufacturing cost and simplify the production of the connector.

Regarding claim 9, see the rejection/discussion on claim 3.

Regarding claim 10, Parent, as modified by Defibaugh, discloses the claimed invention except for the specific angle for the cable exit. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to set the angle to 15°, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 12, see the rejection/discussion on claim 6.

Regarding claim 13, see the rejection/discussion on claim 7.

Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parent in view of Ohtsuki, Defibaugh et al. and Zelno et al. (US 5,197,900).

Parent discloses a low profile cable connector assembly comprising: a first connector (12) comprising a base (38) and a latch; and a cable connector (10)

Art Unit: 2833

comprising a housing (not labeled) defining a mating connector face (at 18) extending opposite a top surface, first and second lateral sides (22,24) extending from said mating connector face, and a cable exit (at 14) extending from one (24) of said first and second sides in a direction parallel to said top surface; wherein said first side of said cable connector comprises a latch retainer (68) thereon; and wherein a jack screw latch located adjacent said second side (22) of said cable connector. Parent also discloses the jackscrew latch opposing the latch retainer, wherein the latch retainer and the jackscrew latch securely connect the mating connector face to the base.

Parent discloses substantially the claimed invention except for the latch and the latch retainer being a bail latch and a bail latch retainer. Ohtsuki teaches an assembly (Figs. 1a and 1b) comprising a first connector (2) with a base (3) and a pivotally mounted bail latch (1); and second connector with a mating face (not labeled) and a bail latch retainer (5) on one side, the bail latch retainer comprising a hook (between 5a and 5b) which receives the bail latch, when the cable connector is mated to the mating connector. This structure allows mating of the connectors along a straight line thus minimizing wear and tear and/or overstress of the terminals of the connectors.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the latch and latch retainer of parent as a pivotally bail latch and a latch retainer, as taught by Ohtsuki, to minimizing wear and tear and/or overstress of the terminals of the connectors.

Parent, as modified, discloses substantially the claimed invention except for the sloped top surface. Defibaugh teaches a cable connector having a cable exit and a top

Art Unit: 2833

surface that is sloped relative to said mating connector face (see Fig.1), thus providing an ergonomic shape and minimizing the space use by the connector. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Parent having the cable exit and the top surface sloped relative to the mating connector face, as taught by Defibaugh, to provide an ergonomic connector and minimize the space used by the connector.

Parent, as modified, discloses substantially the claimed invention except for the jackscrew extending above the top surface of the housing. Zelno discloses the use of a jackscrew (20) extending above the top surface of the housing (12) to allow access of an operator's fingers and thus expedite full connection. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to from the screw jack of Parent extending above the top surface of the housing, as taught by Zelno, to allow access of an operator's fingers and thus expedite full connection.

Regarding claim 16, Parent, as modified by Defibaugh, discloses the claimed invention except for the specific angle for the cable exit. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to set the angle to 15°, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 17, Ohtsuki discloses the bail latch retainer comprising a bail latch slot (5a,5b).

Regarding claim 18, Parent, as modified, discloses substantially the claimed invention except for the first and second back shells (12,14). Defibaugh teaches a connector defined by first and second back-shells (12,14) joined to one another, and one of the back-shells (12) including the retainer structure, thus reducing the manufacturing cost and simplify the production of the connector. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Parent defined by two back-shells joined to one another, as taught by Defibaugh, to reduce the manufacturing cost and simplify the production of the connector.

Regarding claim 19, Parent discloses the latch retainer extending beneath the cable exit on the first side.

Regarding claim 20, Parent, as modified, discloses substantially the claimed invention except for shape of the cable exit. However, it would have been an obvious matter of design preference to form the cable exit having an oval shape (as shown by Defibaugh), since applicant has not disclosed that the oval shape solves any stated problem or is for any particular purpose, and since it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the cable exit having a particular shape in order to accommodate a cable with a particular cross-section. Absent any convincing showing of the criticality of the design, this particular design is nothing more than the inventor's choice without thereby departing from the scope of the invention. *In re Dailey*, 149 USPQ 47 (CCPA 1976).

Response to Arguments

Applicant's arguments filed February 24, 2005 have been fully considered but they are not persuasive.

In response to Applicant's arguments that Ohtsuki does not describe or suggest "a jack screw latch being used in combination with a bail latch to retain a cable connector to a mating connector", please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the present case, Parent discloses a jackscrew latch being used in combination with a (non-jackscrew) latch to retain a cable connector to a mating connector for connector of end fed connectors (col.1 lines 26-31).

In response to Applicant's arguments that "there is no discussion or suggestion in either of the cited references (Parent or Ohtsuki et al.) that excessive wear and stress on the terminals of the Parent device is present or is problematic, and it is not clear that the terminals of the Parent connector are engaged to a mating connector along something other than a straight line at the point of engagement in Figure 8C", it is noted that the prior art (in this case Parent) does not have to state any specific problem in order to improve upon it. Further, Applicant is referred to Figs. 8A and 8B of Parent, in which an angular / pivoting mating is disclosed.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there

Art Unit: 2833

is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been evident to one skilled in the art that an angular /pivoting mating causes an increased wear and tear and/or overstress of the terminals of the connectors, relative to a straight mating.

In response to applicant's argument that Ohtsuki "neither recognize the noted disadvantages of such connectors [as disclosed in the present application], nor describe any structure that is capable of resolving [the disadvantages stated in the present application]", it is again note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, please note that the fact that applicant can recognize another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that Parent and Ohtsuki "nowhere suggest a desirability of providing a bail latch retainer and a jack screw latch on opposing sides of the same connector", i.e. there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is

some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been evident to one skilled in the art that the use of a bail latch allows for a straight mating of the connectors, thus minimizing wear and tear and/or overstress of the terminals of the connectors.

In response to Applicant's arguments with respect to claim 2, please refer to the rejection of claim 2.

In response to Applicant's arguments regarding claim 12, that "the jack screw extending through the top surface is provided for accessibility purposes", it is noted that while the fact that the jackscrew extends above the top surface provides accessibility, this accessibility is not precluded by an arrangement in which the jackscrew does not extend through the top surface, as long as the jack screw extends above such top surface.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ffr 


THO D. TA
PRIMARY EXAMINER